

Date: Thu, 6 Oct 94 04:30:16 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #333
To: Ham-Ant

Ham-Ant Digest Thu, 6 Oct 94 Volume 94 : Issue 333

Today's Topics:

 'No ground' verticals?
 AEA Iso-loop (2 msgs)
 Antennas are prohibited ...!!!!!!..
 AUTEK RF ANALYST
 Feeding Yagis (2 msgs)
FEEDLINE: A Followup Summary. Thanks to all how responded!
 Mobile HF Antennas - the search continues
 Need help tuning a 2m SSB antenna
 Recommend a vertical
 tower salvage question

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 4 Oct 1994 21:39:41 GMT
From: gcouger@olesun.okstate.edu (Gordon Couger)
Subject: 'No ground' verticals?

In article <Cx5quz.JI4@world.std.com>,
Daniel T Senie <dts@world.std.com> wrote:
>In article <36ra19\$dfq@nntp.hut.fi>,
>Jukka Tapio Sirvi | <jsi@vipunen.hut.fi> wrote:
>>In article <acooneyCx4vMn.Lyv@netcom.com> acooney@netcom.com (Alan Cooney)
writes:
>>>I'd like to make a 'no ground' vertical antenna for six meters (to
>>
>>The vertical doesn't need radials, if you make it 1/2 wave length long. You

>>have match the impedance though since it isn't 50 ohm (can't recall now
>>how much it is).

>>

>A vertical dipole (bring the coax away at 90 degrees) also works well.

>

A vertical dipole feed in the center is easy to match 83 ohms 1.5 to 1
swr according to Elnec. 1 inch tubing .47 wavelength long with the low
end .5 wave lengths off the ground will give a 14 degree take off angle
with good radiation from 5 to 52 degrees which should give good performance
in for both e and f2 skip. A piece of copper pipe with a wood dowel
in the center and on one end stuck in to some conduit with the coax
running down the center of the lower element will make a nice installation.

Good luck

Gordon AB5DG

Gordon Couger

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I do not speak for my employer

Date: 4 Oct 1994 14:23:11 GMT

From: moritz@ipers1.e-technik.uni-stuttgart.de ()

Subject: AEA IsoLoop

In article <9410040107.AA00418@venus.atkc.com>,

Dave van De Kerk <davev@atkc.COM> wrote:

>I could put an AEA IsoLoop at about 20

>feet off the ground (roofline) or I can string another long wire.

>

Dave, you can be sure that a lw is by far the better alternative.

The isoLoop really is only for people who don't have the alternative.

If you can afford it, get both and compare. There is a market for second-
hand isoLoops, if you want to get rid of it.

73, Moritz

Date: Wed, 5 Oct 1994 03:47:20 GMT

From: alanb@hpnmarb.sr.hp.com (Alan Bloom)

Subject: AEA IsoLoop

Dave van De Kerk (davev@atkc.COM) wrote:

: Hello,
: I will shortly be moving into an apartment building which
: is somewhat antenna friendly. I could put an AEA IsoLoop at about 20
: feet off the ground (roofline) or I can string another long wire. ...
: Issues I am interested in are TVI, RFI, RF safety and "getting out." ...
: There are trees in the complex, and I could probably get a long
: wire about 70 to 100 feet long, probably peaking about 25 to 35 feet
: off the ground.
: Goals are reliable, hassle free S7 20 meter ssb operation out
: to about 600 miles and 30 meter CW DX. ...

The longwire would probably work better, mainly because of the increased height. However, it could be more of an RFI problem if it runs close to a neighbor's house.

: Grounding for a long wire worries me. I'd be 20 feet from an
: Earth ground, and this is dry California soil. I would also string
: counterpoise wires around the shack ... but ...

For RF purposes, you don't need a ground with the IsoLoop. For the longwire, feed it 1/4 wavelength from one end with a transmission line. Coax would probably work -- sure the SWR would be high, but you won't zap the coax with 50 watts, and a short run on 20 meters won't lose you much power. You could also use twinlead or open-wire feedline if you have a tuner with balanced output. (The 1/4-wave wire stub decouples the feedline from the antenna.)

Awhile back I did a side-by-side comparison of an (original model) AEA IsoLoop and an 80 meter inverted vee with the apex at the same height. I fed the inverted vee on 20 meters with a tuner and compared it with the IsoLoop on 20 meters. I could never see any significant on-the-air difference between the two antennas.

AL N1AL

Date: 4 Oct 1994 13:30:51 GMT
From: little@iamu.chi.dec.com (Todd Little)
Subject: Antennas are prohibited ...!!!!!!...

In article <36q6d6\$60\$1@mhade.production.compuserve.com>, TI Forum <76701.203@CompuServe.COM> writes:

|>Don't WE think it is about time we come out of the ATTIC and
|>STAND up for our rights!!!!
|>I am also stuck with antenna prohibitions. I would like to fight.
|>Alone it will not work ... but as a group!!!!
|>i think we need to lobby our elected officials. Gather support

|>from other Amateur Radio Operators in similar situations.
|>No I don't propose my home owners association allow me to put up
|>a 40M beam on a town house. or Stacked 15 element 2M beams. But
|> out the the ATTIC reduces RFI.
|>Well any one else feel this way!!!

Please feel free to lobby anyone and everyone. I've personally written much of the League's hierarchy and the only really favorable response I got was from Wilson. Sumner went out of his way to suggest that we need to work with local officials and demonstrate our value. The fact that the local RACES (of which I'm an active member), and many disaster related agencies spoke on our behalf, the local egomaniacs (you know, our local elected government) still felt that our town shouldn't live under the specter of high or large or numerous antennas. Dealing with a bunch of self appointed demi-gods doesn't always work.

Personally I beleive this is one of the biggest threats to amateur radio, but I guess those that already have their contest station antenna farms don't have to worry about it.

73,
Todd
N9MWB

Date: Wed, 5 Oct 1994 16:15:46 GMT
From: dts@world.std.com (Daniel T Senie)
Subject: AUTEK RF ANALYST

In article <hawley.780935613@aries>,
Chuck Hawley <hawley@aries.scs.uiuc.edu> wrote:
>tom.alldread@kbsbbs.com (Tom Alldread) writes:
>
>>Greetings to All:
>
>> I wonder if anyone on this conference has any experience with
>>or heard/seen any reports on the Autek Research model RF-1 Antenna
>>Analyst advertized on page 162 of QST? This sure looks like an
>>interesting alternative to some of the other HF antenna analyzers on the
>>market as it appears to offer continuous coverage from 1.2-35 MHZ,
>>provides either SWR or Z measurement up to 2000 Ohms plus an RF LC meter
>>that according to the advertisement can measure very small values of L
>>and C at actual operating frequencies.
>
>> It sure would be nice to hear from someone who has either first
>>hand experience or seen an independent product review on this
>>instrument.

can see a picture of it on page 184 of the September 1994 QST. Actually, you can do even better by running it out through the boom. Incidentally, a coil of coax inside the boom forms an excellent balun if you can figure out how to get it there.

I've heard that Frank is busy on 432.100 MHz every night after 9 PM looking for troposcatter contacts. I know he has worked a station running 200 watts to a single yagi on EME and is undoubtedly interested in working similar stations. Guess the array works :-).

--

Zack Lau KH6CP/1 2 way QRP WAS
 8 States on 10 GHz
Internet: zlau@arrl.org 10 grids on 2304 MHz

Date: 5 Oct 1994 11:47:57 GMT
From: moritz@ipers1.e-technik.uni-stuttgart.de ()
Subject: Feeding Yagis

In article <36somp\$43d@news.uncc.edu>, W Luke Hamaty <wlhamaty@uncc.edu> wrote:
>This may be a simple question, but what is the best way to bring the feedline
>away from a 2m yagi so as not to disrupt the tuning and pattern?

You did not say, if the yagi is intended for horizontal or vertical polarization. in the first case no problem: along the boom and down the mast. If vertically polarized you have the problem of mounting the yagi in the first place. Any conductors parallel with the elements will have to be behind the reflector or at least 1wl away, if not more.

73, Moritz DL5UH

Date: Wed, 5 Oct 1994 12:15:51 GMT
From: cropley@cbnewsf.cb.att.com (andrew peter.cropley)
Subject: FEEDLINE: A Followup Summary. Thanks to all how responded!

Many thanks to all who responded to my original post.

Most folks said to stay away from 9913 (air dialect and water condensation problems)

Some said that 214 was worth any additional money over 213.

Some said I should check out CATV hardline.

I checked out this last item on my way home. (I drive past the main office

for the local CATV company.) I expected to get stonewalled and screened by the receptionist but figured I had to try anyway. The receptionist was very nice. I explained my want and she understood and said "They throw lots of that stuff out in the dumpster! go around back and ask for Dave he'll give you what ever you need". Boy what luck I thought. Got around back and a gruff man with the name "Dave" sewed in his shirt stopped me at the door. I again explained what I was looking for. He said no way instantly. Suggested I check out the local radio shack. It was quickly evident that I would not be beneficiary of any "scraps". I'm sure if I had known him or had a 6-pack under my arm he would have been more receptive. I will try to talk to the construction engineer on friday (he/she was out til then) see if I can talk my way into some stuff.

I left kinda sad, but there is still hope. My brother in law used to work for a CATV firm and I asked him if there was anything he could do for me. He said he would try. There is also the prior mentioned CATV's competitor across the street from where i work.

Q. Anyone know of any "ham-friendly" CATV company in New Jersey??

Q. Looking for plans to build 50 Ohm to 75 Ohm converters. I read the project in the ARRL hand book (1993) Page 34-23 However it says it's for 2-30 MHz. I will be looking for 144 primary and 440 Secondary anyone built these transformers for VHF/UHF?? I imagine they are close to the same design as the one in the ARRL HB.

Thanks again all,

Andy Cropley

N2ZAM

cropley@cbnewsf.att.com

Date: Tue, 4 Oct 1994 13:26:24 GMT
From: sufana@ceco.ceco.com (Charles R. Sufana)
Subject: Mobile HF Antennas - the search continues

David,

I have tried the 4 resonator adapter and had problems right from the start. I almost lost all 4 elements when they helicoptered right off of the M01 mast; I did have one

damaged beyond repair. I use 2 M04 masts each with the 3 resonator adapter mounted on a board that hook up temporarily when I want to run HF mobile. I use an MFJ tuner to switch between masts. Hope this helps.

73,

Charlie Sufana AJ9N sufana@ceco.ceco.com

Date: 4 Oct 1994 10:48:40 -0500
From: andyw@studsys.mscs.mu.edu (Andy Whitcroft)
Subject: Need help tuning a 2m SSB antenna

Hi Netlanders,

I am trying to build a 2m SSB dipole antenna for use in my apartment, but I cannot find any clear answer to the following questions:

1) Do I just cut the wire(s) so the overall length of the element is equal to $468/144.2 = 39$ inches (and therefore tuned ??)

-- OR --

2) how do I tune this antenna with an SWR meter?

3) How can I make the antenna more omni directional?

Any and all help with these questions is appreciated.

T a H d A v N a K n Y c O e U, Andy Whitcroft, N9KWS

+-----+
| Comments/Questions to: andyw@studsys.mscs.mu.edu, |
| BUT send flames to /dev/null |
+-----+

Date: 4 Oct 1994 08:25 -0500
From: soderman@ewir-wr.UCSD.EDU (SODERMAN.WALTER)
Subject: Recommend a vertical

I would appreciate any recommendations for an excellent vertical antenna. I used a Hustler 4BTV many years ago as a novice. Recently got my general to get back into the ham activity, and I've noticed antennas like the MFJ-1798, Cushcraft R-5/R-7, and I'd be interested in some input from folks who have used

these, in addition to other suggestions. I'll be operating HF from 80 to 10 meters. The two meter option (as on the MFJ-1798) is of interest, also. Thanks, in advance, for your replies.

Walt
KE4QOH

Date: 4 Oct 94 17:25:36 GMT
From: enenkel@cs.toronto.edu ("Robert F. Enenkel")
Subject: tower salvage question

I salvaged a bunch of antenna tower sections that someone had put out for the city garbage. They have three 1-1/4" galvanised metal pipes connected with horizontal cross-braces, and are in good condition with no visible rust. Unfortunately, in addition to unbolting the sections from one another, the dismantlers have sawn each of the former 10-foot sections in two, probably so they would fit into the garbage truck. Now, if I machine some short metal rods to fit snugly into the inside of the tower legs, and drill and bolt the sawn sections back together using these stubs, would the resulting tower be safe? Thanks, Robert Enenkel

Date: 4 Oct 1994 14:34:08 GMT
From: Cecil_A_Moore@ccm.hf.intel.com

References<1994Oct3.010332.6314@sol.cs.wmich.edu> <36p7vi\$fvj@chnews.intel.com>,
<1994Oct3.220944.14903@sol.cs.wmich.edu>
Subject: Re: HF antenna questions from newbie ham (semi-long)

In article <1994Oct3.220944.14903@sol.cs.wmich.edu>,
Robert Adams <radams@cs.wmich.edu> wrote:
>In article <36p7vi\$fvj@chnews.intel.com>,
> <Cecil_A_Moore@ccm.ch.intel.com> wrote:
>>Hi Robert, it just depends on what you want your antenna to do.
>
>Not at all. The tuner deals with feedline impedance... not the antenna.

Sounds to me like you believe that feedline impedance measured at the transmitter is independent of the antenna impedance. Actually, the image of the antenna impedance is mirrored and transformed all along the feedline. Change the antenna and you will change the transmitter feedline impedance. Did you know that the transmitter feedline impedance looking into a 450 ohm characteristic impedance feedline is not at all likely to be 450 ohms?

I wanted maximum broadside gain. That pointed to a $10/8$ wavelength dipole. A $10/8$ wavelength dipole is not 50 ohms. I chose my antenna for what I wanted it to do and that necessitated an antenna tuner. I suggest that you read "Reflections", chapter 7... "My Transmatch Really Does Tune My Antenna." Do you understand conjugate matching? Do you understand that for high SWRs, 450 ohm ladder-line is near-lossless on HF? Do you understand that common coax turns into a resistor for high SWRs on 20m?

>>The antenna tuner induces less than 0.5db loss according to the Antenna Handbook, negligible on an 'S' meter.

>

>Don't take one of my classes! On second thought... you can't... I retired.
><grin>

You are welcome in my classes any time. :-)

>>My 88 ft CF dipole works all the way from 80m to 10m

>

>That's all well and good, Cecil. But, you're using a balanced feedline and
>it was an _unbalanced_ feedline that was under discussion. Apples & oranges.

Go back and read the original posting. There was no mention of _unbalanced_ feedline. The original poster asked for suggestions. I am suggesting the use of near-lossless balanced feedline with an all-band dipole.

>>It has a two-lobe 9dbi gain on 20m and a four-lobe 8 dbi gain on 17m over
>>real ground. It has more gain and a lower angle of radiation on 20m than a
>>20m resonant dipole.

>

>Not meaning to sound flippant... but, just how did you arrive at those
>figures? DBI? Sounds like modeling software... not real world data.

Well, you are using binary encoded ASCII characters here in this posting, so, meaning to sound exactly as flippant as you, :-) you are not using real world words.

Of course I am using modeling software. Not many of us have an antenna range in our back yards... do you? Modeling software is a hellava lot better than ignorance.

>>I feed it with 450 ohm ladder-line from a 4:1 balun.

>

>And, again, what has this to do with 50 ohm unbalanced lines?

And again, what does unbalanced lines have to do with the original posting?

>>There are a lot of advantages to all-band non-resonant dipoles.

>

>That's what people with all-band non-resonant dipoles invariably suggest.
>;->

If you know of a simpler wire antenna that will perform better than my 88 ft dipole with 450 ohm ladder-line, I sure would like to hear about it. 450 ohm ladder-line is less lossy and less expensive than coax. For \$25 I have an all-band HF antenna. For \$50 (coax) I could have had a single-band antenna with less gain... go figure the logic in that.

--

73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

Date: 5 Oct 1994 12:02:47 GMT

From: moritz@ipers1.e-technik.uni-stuttgart.de ()

References<36eo65\$99f@masala.cc.uh.edu> <1994Oct3.010332.6314@sol.cs.wmich.edu>,
<RFM.94Oct4134943@urth.eng.sun.com>

Subject: Re: HF antenna questions from newbie ham (semi-long)

>So, where is the power going? Or do you not believe in the conservation
>of energy?

>

Rich,

Just load up a coat hanger, and put out a long call at high power...
you will certainly soon know where the power is going. Dont expect
answers from DX, though.

73, Moritz DL5UH

End of Ham-Ant Digest V94 #333
